NASA Procedural Requirements

COMPLIANCE IS MANDATORY

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Appendix A. Definitions

A.1 Ability and Risk Evaluations. Evaluations performed for the purpose of determining a worker's ability to perform specific job tasks (ability) and the likelihood of harm, either to the worker or others (risk), in relation to anticipated workplace exposures and job demands. Also includes the processes used to evaluate the ability of individuals to safely perform essential duties, if placed in a noisy work environment, and not pose a health or safety risk to themselves or others.

A.2 Action Level. An 8-hour time-weighted average of 82 decibels measured on the A-scale, slow response, or equivalently, a dose of 50 percent. Employee exposure at or above the action level shall trigger enrollment into a hearing conservation program.

A.3 Active Managerial Control. The purposeful incorporation of specific actions or procedures by management into the operation of their establishment to attain control over foodborne illness risk factors.

A.4 Administrative Control. Any procedure that limits noise exposure by restricting access to noise areas or by control of exposure times, distance, and/or work practices.

A.5 Audiometer. An electronic instrument used for measuring hearing threshold levels that conforms to the requirements and specification of the current American National Standard Institute (ANSI) S3.6, Specification for Audiometers standard.

A.6 Baseline Audiogram. The reference audiogram against which future audiograms are compared, typically resulting from an audiometric evaluation conducted at the time the employee is enrolled in the hearing conservation program. The baseline audiogram for

one or both ears is replaced if the employee's hearing thresholds demonstrate either a persistent Standard Threshold Shift (STS) or a persistent improvement as defined in 4.8.3.l5.

A.7 Biological Agents. Pathogenic bacteria, viruses, fungi, and other microorganisms and their associated toxins that have the ability to adversely affect human health in a variety of ways, ranging from relatively mild, allergic reactions to serious medical conditions, even death.

A.8 "Buy Quiet and Quiet by Design" Program. A program that endeavors to achieve long-term reduction of employee noise exposures through purchase and design of equipment with the intention of achieving realistic and achievable noise criteria, which are considered before procurement or design, using criteria based on operational conditions as well as the noise outputs of equipment. The "Buy Quiet and Quiet by Design" approach requires designers and engineers to consider noise emission when purchasing and designing equipment that is expected to generate noise emission levels of concern for hearing conservation (80 dBA and higher).

A.9 Calibration. A check of proper functioning and stability of an audiometer, sound level meter or octave band analyzer, noise dosimeter, or audiometric test room by various means. In cases where methods or requirements vary, the methodology or specification that results in the most accurate data collection shall apply.

A.10 Competent Person. One who is capable of, and has been trained to, identify existing and predictable conditions, which may result from hazardous substances and articles.

A.11 Continuation of Pay (COP). Continuation of pay of an employee's regular pay for up to 45 calendar days due to a disability and/or medical treatment. COP is paid as salary (as opposed to compensation) and only in connection with a traumatic injury. Employees with occupational disease claims are ineligible to receive COP.

A.12 Controvert. To dispute, challenge, or deny the validity of a claim for COP on the basis of specific reasons such as: the injury occurred off premises and the employee was not engaged in authorized "off premises" duties, the injury was caused by the employee's willful misconduct or by the employee's intoxication by alcohol or illegal drugs, or the employee first reported the injury after employment termination.

A.13 Criterion Sound Level. An exposure level of 85 Decibel A-weighted (dBA) Time Weighted Average (TWA) (NASA's maximum occupational exposure level).

A.14 Decibel A-weighted (dBA). A sound level reading in decibels made on the A-weighted network of a Sound Level Meter (SLM) at slow response.

A.15 Decibels, Peak (dBP). The highest instantaneous sound level measured. Commonly used to measure impulsive or impact noise. This quantity cannot be measured on the slow response A-weighted scale.

A.16 De-rating. The process of reassigning the manufacturers' values of hearing protectors to more realistic, real-world performance values.

A.17 Design Review. A formal documented and systematic examination of a design to evaluate food service facilities and/or operations, including: food service facilities, water system construction or modifications, and sanitary facilities for buildings.

A.19 Developmental Toxicity. Adverse effects on the developing organism that may occur anytime from conception to sexual maturity and include such effects as spontaneous abortion, structural or functional defects, low birth weight, or effects that may appear later in life.

A.20 Dose. See Noise Dose.

A.21 Employer. NASA organizations and their associated contractors, to the extent specified in their respective contracts, and other Government agencies, their contractors, and tenants whose primary work is performed at a NASA Center.

A.22 Engineering Control. Any mechanical device or physical barrier that reduces the sound level at the source of noise generation or along the path of propagation of the noise to the potentially exposed individual. This does not include personal protective equipment such as earmuffs or plugs or administrative controls.

A.23 Exchange Rate. The increase or decrease in decibels corresponding to twice (or half) the noise dose. When using a 3 dB exchange rate, a dose corresponding to an exposure of 85 dBA TWA represents twice the dose associated with an 82 dBA TWA exposure.

A.24 First Aid Injuries. Those injuries wherein the employee is examined or treated at NASA's medical facilities or examined and treated by NASA contract medical providers during working hours beyond the date of injury. It also includes instances where two or more visits are made to a medical facility for examination or treatment during non-duty hours beyond the date of injury, as long as no leave or continuation of pay is charged and no medical expenses are incurred.

A.25 Food Establishment. Any operation, including childcare and NASA Exchange-operated facilities, that store, prepares, packages, vends, or otherwise provides food for human consumption at NASA facilities or on NASA property.

A.26 Food Inspectors. Persons who have received specific training in the area of food inspection and regulation, have received certification and/or standardization from an agency that regulates the food industry, or have been credentialed by a state or the National Environmental Health Association.

A.27 Food Manager Certification. A written certification test that requires food managers to demonstrate a basic knowledge of food protection practices.

A.28 Hazard. A biological, physical, or chemical property that may cause a food to be unsafe for human consumption.

A.29 Hazard Analysis Critical Control Point (HACCP) Methodology. A prevention-based food safety management system that identifies and monitors specific food safety hazards that can adversely affect the safety of food products.

A.30 Hazardous Noise Area. Any work area where the environmental noise level is at or above 85 dBA, or where the environmental impulse noise level is at or above 140 dB peak C or linear, regardless of duration of exposure or number of impulses.

A.31 Hazardous Substance or Article. Any material, object, or agent that, because of its quantity, concentration, physical, chemical, infectious, radioactive, or toxic properties poses a significant present or potential hazard to human health and safety by its misuse or if released into the workplace or the environment. This includes, but is not limited to,

any substance listed in Appendix A of this section. (A partial list of hazardous substances and articles is included in Appendix A.)

A.32 Hearing Threshold Level (HTL). The hearing level, above a reference value (audiometric zero), at which a specified sound or tone is heard by an ear in a specified fraction of the trials. For pure-tone air-conduction audiometry, hearing levels are sound pressure levels of pure tones at audiometric frequencies, such that 0 dB HTL, or audiometric zero, typifies the threshold of hearing of young otologically-normal persons.

A.33 Impulsive or Impact Noise. Variations in noise levels that involve peaks of intensity that occur at intervals of greater than 1 second. If the noise peaks occur at intervals of 1 second or less, the noise is considered continuous.

A.34 Major Food Safety Incident. Any of the following or related events occurring at an establishment on NASA property or regularly serving NASA personnel: a known poisoning resulting in hospitalization; two or more suspected poisonings; any known or suspected incident of food contamination resulting or potentially resulting in exposure to personnel; or any similar or related incidents. All major food safety incidents will be categorized and investigated based on NPR 8621.1, NASA Procedural Requirements for Mishap and Close Call Reporting, Investigating, and Recordkeeping.

A.35 Maximal medical improvement. A condition or state that is well stabilized and unlikely to change substantially in the next year, with or without medical treatment. Over time, there may be some change; however, further recovery or deterioration is not anticipated.

A.36 Nanoparticles. Materials that have at least one dimension (e.g., length, width, height, diameter) that is less than 100 nanometers. Nanoparticles may be suspended in a gas (e.g., nanoaerosol), suspended in a liquid (e.g., nanocolloid or nanohydrosol), or embedded in a matrix (e.g., nanocomposite).

A.37 Nanometer (nm). 1 x 10-9 meters or one millionth of a millimeter.

A.38 Noise Dose. A measure of cumulative noise exposure over a stated time period, which takes into account both the intensity of sound and the duration of exposure. Dose is a dimensionless quantity that represents the amount of actual noise exposure relative to the amount of allowable noise exposure (criterion level) and for which 100 percent and above represents noise exposures that are hazardous.

A.39 Noise Dosimeter. An instrument that integrates a function of sound pressure over a period of time in such a manner that it directly indicates a noise dose.

A.40 Noise Reduction Rating (NRR). A noise reduction value, in decibels, averaged across the frequencies from 125 Hz to 8 kHz and computed from laboratory tests of the attenuation of hearing protectors measured under ideal conditions. The NRR, per a 1979 Environmental Protection Agency (EPA) regulation, is required to appear on all devices worn on the head or ear that are sold for purposes of personal noise reduction. See "Derating."

A.41 Noise Survey. A periodic or event-driven investigation of a hazardous noise, Standard Threshold Shift (STS), or other driving condition for the purposes of determining the noise levels, frequencies, and other sound characteristics as they relate to employee exposure.

A.42 Occupational disease or illness. A condition produced by the work environment

over a period longer than one work day or shift. It may result from infection, repeated stress or strain, or repeated exposure to toxins, poisons, fumes or other continuing conditions of the work environment.

A.43 Occupational Hearing Conservationist (OHC). Also known as an industrial audiometric technician. A person who is certified by the Council on Accreditation for Occupational Hearing Conservation (CAOHC) and conducts the practice of hearing conservation, including pure-tone air-conduction hearing testing and other associated duties under the supervision of an audiologist or physician.

A.44 Packaged food must be labeled in accordance with respective Federal, state, and local regulations, and the FDA Food Code. Proper labeling includes name of manufacturer and an accurate statement of the contents.

A.45 Potentially Hazardous Food. A food that is natural or synthetic and that requires temperature control because it is capable of supporting the rapid and progressive growth of infectious or toxigenic microorganisms, the growth and toxin production of Clostridium botulinum, or in raw shell eggs, the growth of Salmonella enteritidis. Includes foods of animal origin that are raw or heat-treated; foods of plant origin that are heat-treated or consist of raw seed sprouts, cut melons, and garlic in oil mixtures that are not acidified or otherwise modified at a processing plant in a way that results in mixtures that do not support growth of pathogenic microorganisms as previously described.

A.46 Representative Exposure. Measurements of an employee's noise dose or 8-hour time-weighted average sound level that is representative of the exposure of other employees exposed to the same noise hazard.

A.47 Revised Baseline. The most recent audiogram that has established a persistent STS upon retest or a significant improvement. Baseline revisions shall be used as the basis of comparison for future audiograms. Since ears are considered separately when making baseline revisions, it is possible for someone to have baseline audiograms from different years, as well.

A.48 Reproductive Toxicity. Adverse effects on the health of the reproductive organs, endocrine system, or gametes (egg or sperm) from exposure to an exogenous agent that may result in effects such as menstrual dysfunction, impaired fertility, feminization/masculinization, or inability to maintain a pregnancy.

A.49 Risk-Based Inspection. An assessment of the degree of active managerial control that an operator has over the foodborne illness risk factors in the establishment; and the focusing of inspections on the control of foodborne illness risk factors, which embody a preventive rather than reactive approach to food safety.

A.50 Risk Factor. One of the broad categories of contributing factors to foodborne illness outbreaks, as identified in the Centers for Disease Control and Prevention (CDC) Surveillance Report for 1993-1997, that directly relates to foodborne safety concerns within retail and food service establishments. The factors are: Food from Unsafe Sources, Inadequate Cooking Temperatures, Improper Holding Temperatures, Contaminated Equipment, and Poor Personal Hygiene.

A.51 Significant Improvement. A significant improvement is shown if the average of thresholds at 2000, 3000, and 4000 Hz for either ear shows an improvement of 5 dB or more from the baseline audiogram.

A.52 Sound Pressure Level (SPL). 20 times the common logarithm of the ratio of the square of the measured A-weighted sound pressure to the square of the standard reference pressure of 20 micropascals.

A.53 Standard Threshold Shift (STS). A decline in hearing threshold, relative to the baseline audiogram, of an average of 10 dB or more at 2000, 3000, and 4000 Hz in either ear.

A.54 Temporary Event. A food establishment that operates in conjunction with a single event or celebration.

A.55 Traumatic injury. A wound or other condition of the body caused by external force, including stress or strain. It must occur at a specific time and place and must affect a specific area or function of the body. The injury must be caused by a specific event or incident or series of events or incidents within a single day or work shift. Traumatic injuries include damage to personal appliances or devices, such as dentures, artificial limbs, eye glasses, and hearing aids when the injury ultimately required medical attention.

A.56 Vector. An organism that is capable of transmitting a pathogen from one organism to another.

A.57 Vermin. Any of various small animals or insects that are destructive or pose a health hazard to humans, plants, or animals in the environment.

A.58 Work Role Position. Any job or position at a Center that does not change appreciably when a contract is awarded to a new contractor and the same employee of the former employer occupies the position.

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